

Solderless connections - Part 3: Accessible insulation displacement (ID) connections - General requirements, test methods and practical guidance

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NATIONAL FOREWORD

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**Solderless connections - Part 3: Accessible insulation
displacement (ID) connections - General requirements, test
methods and practical guidance
(IEC 60352-3:2020)**

Connexions sans soudure - Partie 3: Connexions
autodénudantes accessibles sans soudure - Règles
générales, méthodes d'essai et guide pratique
(IEC 60352-3:2020)

Lötfreie elektrische Verbindungen - Teil 3: Lötfreie
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Anforderungen, Prüfverfahren und Anwendungshinweise
(IEC 60352-3:2020)

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European foreword

The text of document 48B/2789/FDIS, future edition 2 of IEC 60352-3, prepared by SC 48B "Electrical connectors" of IEC/TC 48 "Electrical connectors and mechanical structures for electrical and electronic equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60352-3:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-02-14
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-05-14

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In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60352-4	NOTE	Harmonized as EN 60352-4
IEC 61984	NOTE	Harmonized as EN 61984

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60068-1	-	Environmental testing - Part 1: General and guidance	EN 60068-1	-
IEC 60228	-	Conductors of insulated cables	EN 60228	-
IEC 60512-1	-	Conductors of insulated cables	EN IEC 60512-1	-
IEC 60512-1-1	-	Connectors for electronic equipment - Tests and measurements - Part 1-1: General examination - Test 1a: Visual examination	EN 60512-1-1	-
IEC 60512-1-2	-	Connectors for electronic equipment - Tests and measurements - Part 1-2: General examination - Test 1b: Examination of dimension and mass	EN 60512-1-2	-
IEC 60512-2-1	-	Connectors for electronic equipment - Tests and measurements - Part 2-1: Electrical continuity and contact resistance tests - Test 2a: Contact resistance - Millivolt level method	EN 60512-2-1	-
IEC 60512-2-2	-	Connectors for electronic equipment - Tests and measurements - Part 2-2: Electrical continuity and contact resistance tests - Test 2b: Contact resistance - Specified test current method	EN 60512-2-2	-
IEC 60512-2-5	-	Connectors for electronic equipment - Tests and measurements - Part 2-5: Electrical continuity and contact resistance tests - Test 2e: Contact disturbance	EN 60512-2-5	-

IEC 60512-6-4	-	Connectors for electronic equipment - Tests and measurements - Part 6-4: Dynamic stress tests - Test 6d: Vibration (sinusoidal)	EN 60512-6-4	-
IEC 60512-9-2	-	Connectors for electronic equipment - Tests and measurements - Part 9-2: Endurance tests - Test 9b: Electrical load and temperature	EN 60512-9-2	-
IEC 60512-11-1	-	Connectors for electrical and electronic equipment - Tests and measurements - Part 11-1: Climatic tests - Test 11a - Climatic sequence	EN IEC 60512-11-1	-
IEC 60512-11-4	-	Connectors for electronic equipment - Tests and measurements - Part 11-4: Climatic tests - Test 11d: Rapid change of temperature	EN 60512-11-4	-
IEC 60512-11-7	-	Connectors for electronic equipment - Tests and measurements - Part 11-7: Climatic tests - Test 11g: Flowing mixed gas corrosion test	EN 60512-11-7	-
IEC 60512-11-9	-	Connectors for electronic equipment - Tests and measurements - Part 11-9: Climatic tests - Test 11i: Dry heat	EN 60512-11-9	-
IEC 60512-11-10	-	Connectors for electronic equipment - Tests and measurements - Part 11-10: Climatic tests - Test 11j: Cold	EN 60512-11-10	-
IEC 60512-11-12	-	Connectors for electronic equipment - Tests and measurements - Part 11-12: Climatic tests - Test 11m: Damp heat, cyclic	EN 60512-11-12	-

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Solderless connections –

Part 3: Accessible insulation displacement (ID) connections – General requirements, test methods and practical guidance

Connexions sans soudure –

Partie 3: Connexions autodénudantes accessibles – Règles générales, méthodes d'essai et guide pratique



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INTERNATIONAL STANDARD

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CONTENTS

FOREWORD.....	5
INTRODUCTION.....	7
1 Scope.....	9
2 Normative references	9
3 Terms and definitions	10
4 Workmanship.....	13
5 Prerequisites for basic test schedule	13
5.1 General.....	13
5.2 Prerequisites for accessible ID terminations.....	14
5.2.1 Accessible ID termination materials	14
5.2.2 Accessible ID termination dimensions.....	14
5.2.3 Accessible ID termination surface finishes	14
5.2.4 Accessible ID termination design features	14
5.3 Prerequisites for wires and conductors.....	14
5.3.1 Wires and conductors	14
5.3.2 Wire insulation.....	15
5.4 Accessible insulation displacement connections (accessible ID connections).....	15
6 Testing	15
6.1 Introduction.....	15
6.2 General.....	15
6.3 Standard conditions for testing.....	16
6.4 Preconditioning	16
6.5 Recovery	16
6.6 Mounting of specimen	16
7 Tests	16
7.1 General examination	16
7.2 Mechanical tests	17
7.2.1 Transverse extraction force	17
7.2.2 Bending of the wire.....	18
7.2.3 Vibration.....	19
7.2.4 Repeated connection and disconnection, reusable accessible ID terminations.....	20
7.3 Electrical tests	20
7.3.1 General	20
7.3.2 Contact resistance	21
7.3.3 Electrical load and temperature	22
7.4 Climatic tests	22
7.4.1 General	22
7.4.2 Rapid change of temperature.....	22
7.4.3 Climatic sequence	22
7.4.4 Flowing mixed gas corrosion test.....	22
7.4.5 Damp heat, cyclic	23
8 Test schedules	23
8.1 General.....	23
8.1.1 Overview	23

8.1.2	ID connections with terminations suitable for a range of wire diameters	23
8.1.3	Multipole connectors	23
8.2	Basic test schedule	24
8.2.1	Généralités	24
8.2.2	Initial examination	24
8.2.3	Testing of accessible ID connections	24
8.3	Full test schedule	26
8.3.1	General	26
8.3.2	Initial examination	26
8.3.3	Testing of accessible ID connections	26
8.4	Flow charts	29
Annex A (informative)	Practical guidance	32
A.1	General information on accessible ID connections	32
A.1.1	General	32
A.1.2	Advantages of accessible ID connections	32
A.2	Current-carrying capacity	33
A.3	Tool information	33
A.3.1	Wire insertion tool	33
A.3.2	Wire extraction tool	33
A.3.3	Combination tool	33
A.4	Termination information	33
A.4.1	General	33
A.4.2	Design features	34
A.4.3	Materials	34
A.4.4	Surface finishes	34
A.5	Wire information	34
A.5.1	Type	34
A.5.2	Dimensions	34
A.5.3	Surface finishes	34
A.5.4	Insulation	34
A.6	Connection information	35
Annex B (informative)	Application examples	37
B.1	Examples for good IDCs or negative results (see Figure B.1 to Figure B.7)	37
B.2	Examples for good transversal micro section or negative results	39
Bibliography		40
Figure 1	– Example of accessible and non-accessible insulation displacement connection	7
Figure 2	– Insulation displacement connection	11
Figure 3	– Slot	12
Figure 4	– Beam	13
Figure 5	– Test arrangement, transverse extraction force	17
Figure 6	– Test arrangement, bending of the wire	18
Figure 7	– Test arrangement, vibration	19
Figure 8	– Test arrangement, contact resistance	21
Figure 9	– Basic test schedule (see 8.2)	30
Figure 10	– Full test schedule (see 8.3)	31

Figure A.1 – Example of a single-type accessible ID termination with a solid round conductor.....	36
Figure B.1 – Example of correct and acceptable ID connections	37
Figure B.2 – Examples for good IDCs or negative results.....	37
Figure B.3 – Faulty IDC: damaged contacts	38
Figure B.4 – Requirements for open-ended IDCs	38
Figure B.5 – Faulty IDC: damaged wire	38
Figure B.6 – IDC: Wire position.....	39
Figure B.7 – IDC: transversal micro section	39
Table 1 – Minimum transverse extraction force	18
Table 2 – Vibration, preferred test severities	19
Table 3 – Contact resistance of accessible ID connections, maximum permitted values	21
Table 4 – Number of specimens required	24
Table 5 – Qualification test schedule – Test group 1	25
Table 6 – Qualification test schedule – Test group 2	25
Table 7 – Qualification test schedule – Test group 3	26
Table 8 – Qualification test schedule – Test group A.....	27
Table 9 – Qualification test schedule – Test group B.....	27
Table 10 – Qualification test schedule – Test group C	28
Table 11 – Qualification test schedule – Test group D	29
Table 12 – Qualification test schedule – Test group E.....	29

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SOLDERLESS CONNECTIONS –**Part 3: Accessible insulation displacement (ID) connections –
General requirements, test methods and practical guidance**

FOREWORD

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International Standard IEC 60352-3 has been prepared by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

This second edition cancels and replaces the first edition published in 1993. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Subclause 7.2.2: reduce the limit of duration of contact disturbance to 1 μ s.
- b) Subclause 7.2.3: reduce the limit of duration of contact disturbance to 1 μ s.
- c) Transferred Clauses 9 to 13 to Annex A (informative).
- d) The figures were revised for clarity.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
48B/2789/FDIS	48B/2802/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60352 series, published under the general title *Solderless connections*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

The two following parts of IEC 60352 are available on solderless insulation displacement connections:

- Part 3: Accessible insulation displacement connections – General requirements, test methods and practical guidance;
- Part 4: Solderless non-accessible insulation displacement connections – General requirements, test methods and practical guidance.

NOTE In this document the term "insulation displacement" is abbreviated to "ID", for example "ID connection", "ID termination".

Figure 1 illustrates examples of accessible and non-accessible insulation displacement connections that clarify the difference among them.

Part 3 includes requirements and relevant tests (normative) as well as a practical guidance in Annex A (informative) for accessible ID connections.

Two test schedules are provided:

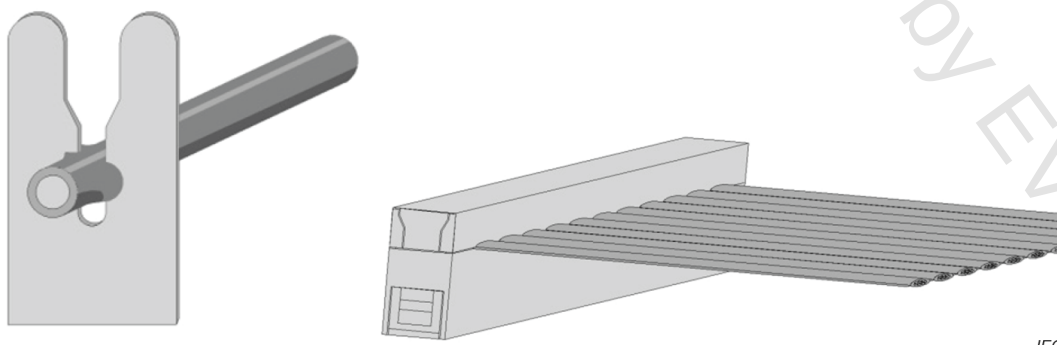
- the basic test schedule which applies to insulation displacement connections which conform to all prerequisites of Clause 5. It is derived from experience with successful applications of such connections;
- the full test schedule which applies to insulation displacement connections which do not fully conform to all prerequisites of Clause 5, for example which are manufactured using materials or finishes not included in Clause 5.

This philosophy permits cost and time effective performance verification using a limited basic test schedule for established insulation displacement connections and an expanded full test schedule for connections requiring more extensive performance validation.

The suitability of the accessible ID connection implies that the specified requirements and tests apply to all factors involved in producing a suitable ID connection, namely:

- the accessible ID termination, which may be part of a single-pole or multipole connector;
- the wire (or range of wires) for which the termination is suitable;
- the tools (if any) required to produce that type of solderless connection.

The practical guidance (informative Annex A) serves as a guideline for the required workmanship. Attention is drawn to the fact that some industries (e.g. automotive, aerospace, nuclear, military) may have specific workmanship standards and/or quality requirements, which are outside the scope of this standard.



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Figure 1 – Example of accessible and non-accessible insulation displacement connection

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